Claims

1. A method of measuring jitter, comprising:

evaluating a clock signal within a first window;

determining a recovered clock period from the clock signal within the first window;

evaluating the clock signal within a second window, the second window being smaller than the first window; and

determining the clock signal's jitter within the second window.

2. The method of measuring jitter of claim 1, wherein the second window is located within the first window.

3. The method of measuring jitter of claim 1, wherein the second window is at least partially located outside the first window.

4. The method of measuring jitter of claim 1, wherein the clock signal is recovered from a data signal.

5. The method of measuring jitter of claim 1, further comprising determining a jitter figure of merit from evaluation of jitter within the second window.

6. The method of measuring jitter of claim 1, wherein the first window is a fraction of a modulation period of a spread spectrum clock.

7. The method of measuring jitter of claim 1, further comprising evaluating the clock signal within more than one second window, each second window being smaller than the first window and located within the first window.

8. The method of measuring jitter of claim 1, wherein the clock signal is a PCI Express bus clock signal.

9. The method of measuring jitter of claim 1, wherein the second window position is approximately centered within the first window.

10. The method of measuring jitter of claim 1, further comprising sampling the clock signal for evaluation.

11. The method of measuring jitter of claim 10, further comprising using Sinc interpolation to produce interpolated sampling points.

12. The method of measuring jitter of claim 11, further comprising using linear interpolation to estimate transition points.

13. The method of measuring jitter of claim 1, wherein determining a recovered clock period comprises employing a minimize deviation fit algorithm to the clock signal within the first window.

14. The method of measuring jitter of claim 1, wherein determining the clock signal's jitter within the second window comprises measuring the difference between an expected clock transition point and an actual transition point for each clock transition point within the window.

15. The method of measuring jitter of claim 1, further comprising generation of an eye pattern, and comparison of the generated eye pattern with an eye template defining maximum allowable jitter.

16. A jitter measurement apparatus, the apparatus comprising a clock signal measurement module operable to:

evaluate a clock signal within a first window;

determine a recovered clock period from the clock signal within the first window;

evaluate the clock signal within a second window, the second window being smaller than the first window and located within the first window; and

determine the clock signal's jitter within the second window.

17. The jitter measurement apparatus of claim 16, wherein the second window is located within the first window.

18. The jitter measurement apparatus of claim 16, wherein the second window is at least partially located outside the first window.

19. The jitter measurement apparatus of claim 16, the apparatus further operable to recover the clock signal from a data signal.

20. The jitter measurement apparatus of claim 16, the clock signal measurement module further operable to determine a jitter figure of merit from evaluation of jitter within the second window.

21. The jitter measurement apparatus of claim 16, wherein the first window is a fraction of a modulation period of a spread spectrum clock.

22. The jitter measurement apparatus of claim 16, the clock signal measurement module further operable to evaluate the clock signal within more than one second window, each second window being smaller than the first window and located within the first window.

23. The jitter measurement apparatus of claim 16, wherein the clock signal is a PCI Express bus clock signal.

24. The jitter measurement apparatus of claim 16, wherein the second window position is approximately centered within the first window.

25. The jitter measurement apparatus of claim 16, the clock signal measurement module further operable to sample the clock signal for evaluation.

26. The jitter measurement apparatus of claim 25, the clock signal measurement module further operable to produce interpolated sampling points using Sinc interpolation.

27. The jitter measurement apparatus of claim 26, the clock signal measurement module further operable to estimate transition points using linear interpolation.

28. The jitter measurement apparatus of claim 16, wherein determining a recovered clock period comprises employing a minimize deviation fit algorithm to the clock signal within the first window.

29. The jitter measurement apparatus of claim 16, wherein determining the clock signal's jitter within the second window comprises measuring the difference between an expected clock transition point and an actual transition point for each clock transition point within the window.

30. The jitter measurement apparatus of claim 16, the clock measurement module further operable to generate an eye chart, the eye chart configured for comparison with an eye pattern template indicating maximum allowable jitter.

31. A machine-readable medium with instructions coded thereon, the instructions when executed operable to cause a computerized system to:

evaluate a clock signal within a first window;

determine a recovered clock period from the clock signal within the first window;

evaluate the clock signal within a second window, the second window being smaller than the first window and located within the first window; and

determine the clock signal's jitter within the second window.

32. The machine-readable medium of claim 31, wherein the second window is located within the first window.

33. The machine-readable medium of claim 31, wherein the second window is at least partially located outside the first window.

34. The machine-readable medium of claim 31, wherein the clock signal is recovered from a data signal.

35. The machine-readable medium of claim 31, the instructions further operable when executed to calculate a jitter figure of merit from evaluation of jitter within the second window.

36. The machine-readable medium of claim 31, wherein the first window is a fraction of a modulation period of a spread spectrum clock.

37. The machine-readable medium of claim 31, the instructions further operable when executed to evaluate the clock signal within more than one second window, each second window being smaller than the first window and located within the first window.

38. The machine-readable medium of claim 31, wherein the clock signal is a PCI Express bus clock signal.

39. The machine-readable medium of claim 31, wherein the second window position is approximately centered within the first window.

40. The machine-readable medium of claim 31, the instruction further operable when executed to sample the clock signal for evaluation.

41. The machine-readable medium of claim 40, the instructions further operable when executed to produce interpolated sampling points using Sinc interpolation.

42. The machine-readable medium of claim 41, the instructions further operable when executed to estimate transition points using linear interpolation.

43. The machine-readable medium of claim 31, wherein determining a recovered clock period comprises employing a minimize deviation fit algorithm to the clock signal within the first window.

44. The machine-readable medium of claim 31, wherein determining the clock signal's jitter within the second window comprises measuring the difference between an expected clock transition point and an actual transition point for each clock transition point within the window.

45. The machine-readable medium of claim 31, the instructions further operable to generate an eye chart, the eye chart configured for comparison with an eye pattern template indicating maximum allowable jitter.